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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,877	10/20/2003	Jyn-Guo Hwang	2450-0570P	2082

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EXAMINER	
HENN, TIMOTHY J	
ART UNIT	**PAPER NUMBER**
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/12/2007.

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mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/687,877	HWANG ET AL.	
	Examiner	Art Unit	
	Timothy J. Henn	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

2. Claim 6 is objected to because of the following informalities: In claim 6, the limitation "wherein is formed of" is unclear, for the purposes of art rejection the limitation will be read as "wherein said readout circuit is formed of". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4, 5, and 7-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Chao et al. (US 2004/0041932).

[claim 1]

Regarding claim 1, Chao discloses a CMOS image sensor chip integrated with an RF transmitter, comprising: a CMOS image sensor used for detecting an input light as an image signal (Figure 4A, NxM Pixel Cell Array) and an RF transmitter, used for modulating the image signal to be transmitted (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 2]

Regarding claim 2, Chao discloses a CMOS imaging sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array); a readout circuit (Figure 4A, Circuitry Region 150; Paragraph 0041) and a timing control circuit (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 4]

Regarding claim 4, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

[claim 5]

Regarding claim 5, Chao discloses a CMOS image sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array), and a readout circuit, timing and control circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 7]

Regarding claim 7, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

[claim 8]

Regarding claim 8, Chao discloses a linear image sensor (Figure 4A, NxM Pixel Cell Array; The examiner notes that since the claim recites "comprises", one row of Chao's image sensor can be considered a linear image sensor for the purposes of rejecting claim 8), and a readout circuit and timing control circuit (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 9]

Regarding claim 9, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

[claim 10]

Regarding claim 10, Chao discloses a linear image sensor (Figure 4A, NxM Pixel Cell Array; The examiner notes that since the claim recites "comprises", one row of Chao's image sensor can be considered a linear image sensor for the purposes of rejecting claim 8), and a readout circuit, timing control circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 11]

Regarding claim 11, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

[claim 12]

Regarding claim 12, Chao discloses a CMOS image sensor single chip integrated with an RF transmitter, comprising: a CMOS image sensor used for detecting an input light as an image signal (Figure 4A, NxM Pixel Cell Array; Figure 4A, Circuit Region 150, Paragraph 0041); a signal processing unit, used for processing of the

digital image signal to an application signal (Figure 4A, Circuit Region 150; Paragraph 0041; The examiner notes that "application signal" as claimed is not defined as having any specific properties, therefore, any processed image signal can be read as being an "application signal" for the purposes of claim rejection) and an RF transmitter, used for modulating the image signal to be transmitted (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 13]

Regarding claim 13, Chao discloses a CMOS image sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array), and a readout circuit, timing and control circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 14]

Regarding claim 14, Chao discloses a linear image sensor (Figure 4A, NxM Pixel Cell Array; The examiner notes that since the claim recites "comprises", one row of Chao's image sensor can be considered a linear image sensor for the purposes of rejecting claim 8), and a readout circuit, timing control circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 15]

Regarding claim 15, Chao discloses a CMOS image sensor single chip integrated with an RF transmitter, comprising: a CMOS image sensor, used for detecting an input light as a digital image signal (Figure 4A, NxM Pixel Cell Array; Figure 4A, Circuit Region 150, Paragraph 0041); a signal processing unit, used for

providing timing for the CMOS sensor, receiving the digital image signal and processing the digital image signal to an application signal (Figure 4A, Circuit Region 150; Paragraph 0041; The examiner notes that "application signal" as claimed is not defined as having any specific properties, therefore, any processed image signal can be read as being an "application signal" for the purposes of claim rejection) and an RF transmitter, used for modulating the image signal to be transmitted (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 16]

Regarding claim 16, Chao discloses a CMOS image sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array), and a readout circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 17]

Regarding claim 17, Chao discloses a linear image sensor (Figure 4A, NxM Pixel Cell Array; The examiner notes that since the claim recites "comprises", one row of Chao's image sensor can be considered a linear image sensor for the purposes of rejecting claim 8), and a readout circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 18]

Regarding claim 18, Chao discloses the use of DSP devices (Figure 4A, Circuitry Region 150; Paragraph 0041). The examiner notes that DSP devices are capable of or "can" compress and transfer a digital image to an application signal as claimed (The examiner notes that "application signal" as claimed is not defined as having any specific

properties, therefore, any processed image signal can be read as being an "application signal" for the purposes of claim rejection).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 2004/0041932).

[claims 3 and 6]

Regarding claims 3 and 6, Chao discloses a CMOS image sensor with rows and columns and a readout circuit (Figure 4A; Paragraph 0041), but does not specifically disclose row and column readout circuits. Official Notice is taken that the use of row and column readout circuits are notoriously well known in the art as components which make up an image sensor readout circuit and allow pixels from specific rows and columns to be readout. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include row and column readout circuits as part of the readout circuitry of Chao to readout pixel signals from specific rows and columns as desired.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

i. Shaw et al. US 6,606,122

ii. Yang et al. US 6,665,012

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH
1/3/2007

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